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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/465,436	12/16/1999	CHRISTOPHER MIDGLEY	NTK-005.01	8863

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EXAMINER
ALAM, SHAHID AL

ART UNIT	PAPER NUMBER
2172	

DATE MAILED: 01/30/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/465,436	MIDGLEY ET AL.	
	Examiner	Art Unit	
	Shahid Al Alam	2172	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 November 2002* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-28* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *20* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

1. This action is in response to RCE filed on 18 November 2002.

Information Disclosure Statement

2. The reference cited in the information disclosure statement submitted on 18 November 2002, Paper No. 20 have been considered by the examiner.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Number 5,758,359 issued to Paul Saxon ("Saxon") in view of U.S. Patent Number 5,604,900 issued to Kouji Iwamoto et al. ("Iwamoto").

With respect to claim 1, Saxon teaches a process for storing data (see abstract), comprising:

providing a back up server having storage for a plurality of data files (column 4, lines 39 – 57),

providing a long term memory device having a plurality of data storage elements and a processor for coordinating the operation of the plural data storage elements (column 3, lines 55 – 66),

directing the processor to store data on the storage elements and for recording a time signal representative of the time of recording (column 4, lines 52 – 60),

a condition representative of each storage elements having reached capacity (Saxon's teaching of the selection criteria comprises a "maximum size" threshold associated with the scheduled level. The maximum size threshold indicates a maximum size (i.e., quantity of data, i.e., capacity of the storage medium) that the save set at the scheduled level must not exceed (reached capacity). This parameter is chosen by the system administrator or user, who determines that this is the maximum amount of data that can be backed up in the allotted backup time (earliest predetermined

backup time), regardless of the level scheduled for backup, see column 7, lines 19 – 27), and

bases on the condition, directing the processor to compare the time signals for each data storage element to store data on the storage elements having the earliest recorded data (This parameter is chosen by the system administrator or user, who determines that this is the maximum amount of data that can be backed up in the allotted backup time (earliest predetermined backup time), regardless of the level scheduled for backup, see column 5, lines 39 – 45; column 7, lines 19 – 32 and 43 - 50).

Saxon's teaching states that the method of Saxon proceeds in reverse timestamp order, beginning with the timestamp of the most recent save set as the current timestamp. The total size is compared to the maximum size threshold to determine if the total size is less than or equal to the maximum size threshold. Saxon's teaching shows that processor is comparing with respect to timestamp to determining the maximum size threshold based on condition.

Saxon does not explicitly teach detecting a condition as claimed.

Iwamoto teaches claimed detecting a condition (column 6, lines 29 – 38; Iwamoto).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine Iwamoto with Saxon, combination would make a system capable of dynamically expanding a file while retaining an optimum allocation space efficiency of a data store medium and allowing file recovery and job degradation

when a failure of a dynamically expanded file or dynamic file expansion itself occurs (column 2, lines 55 – 67; Iwamoto).

As to claim 5, the processor to store data on the storage elements includes directing the processor to store data on each storage element until each storage element reaches capacity (column 7, lines 19 – 40).

Claims 2, 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saxon and Iwamoto as applied to claim 1 above, and further in view of U. S. Patent Number 6,023,709 issued to Matthew Anglin et al., ("Anglin").

With respect to claims 2 – 4, Saxon teaches that the backup storage element includes a backup volume in the form of a tape or diskette.

Saxon does not explicitly teach a tape library having a plurality of drive elements and a robotic controller.

As to claim 2, Anglin, in a back-up system similar to Saxon, teaches a long-term memory device including a tape library system having a plurality of drive elements (column 3, lines 42 – 47).

As to claim 3, Anglin, in a back-up system similar to Saxon, teaches the tape library includes a robotic controller for moving tapes in an out of tape drive system (column 3, lines 48 – 50).

As to claim 4, Anglin, in a back-up system similar to Saxon, teaches the long-term memory device includes a raid storage system (column 3, lines 31 – 35).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to combine Anglin with Saxon and Iwamoto because the tape library, robotic controller and RAID array provide additional hardware capabilities for the combined system and thus improve its robustness.

Claims 6 – 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Number 5,758,359 issued to Paul Saxon ("Saxon") in view of U.S. Patent Number 5,604,900 issued to Kouji Iwamoto et al. ("Iwamoto").

With respect to claim 6, Saxon teaches a condition representing a storage capacity of at least one of at least two data storage elements (column 4, line 65 – column 5, line 14); and

based on condition, storing the data on the data storage element associated with an earliest time of storage (column 7, lines 22 – 27).

Saxon's teaching states that the method of Saxon proceeds in reverse timestamp order, beginning with the timestamp of the most recent save set as the current timestamp. The total size is compared to the maximum size threshold to determine if the total size is less than or equal to the maximum size threshold. Saxon's teaching shows that processor is comparing with respect to timestamp to determining the maximum size threshold based on condition.

Saxon does not explicitly teach detecting a condition as claimed.

Iwamoto teaches claimed detecting a condition (column 6, lines 29 – 38; Iwamoto).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine Iwamoto with Saxon, combination would make a system capable of dynamically expanding a file while retaining an optimum allocation space efficiency of a data store medium and allowing file recovery and job degradation when a failure of a dynamically expanded file or dynamic file expansion itself occurs (column 2, lines 55 – 67; Iwamoto).

As to claim 7, associating at least one time of storage with the at least two data storage elements (column 4, line 66 – column 5, line 5; Saxon).

As to claim 8, comparing at least one time of storage with at least two data storage elements; and identifying the data storage element associated with the earliest time of storage (column 5, lines 4 – 14 and column 7, lines 43 – 50; Saxon).

As to claim 9, providing a storage system including the at least two data storage elements and a processor for controlling data storage on the at least two data storage elements (column 5, lines 4 – 14; Saxon).

Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saxon and Iwamoto as applied to claim 6 above, and further in view of U. S. Patent Number 6,023,709 issued to Matthew Anglin et al., ("Anglin").

With respect to claims 10 and 11, Saxon teaches that the backup storage element includes a backup volume in the form of a tape or diskette.

Saxon does not explicitly teach a tape library having a plurality of drive elements and a robotic controller.

As to claim 10, Anglin, in a back-up system similar to Saxon, teaches the storage system includes a tape library system, a hard disk system, read/write CD-ROM system and a RAID system (column 3, lines 25 – 34 and lines 41 – 47).

As to claim 11, Anglin, in a back-up system similar to Saxon, teaches the storage system includes a tape library system having a library of tapes, a tape drive, and a robotic controller for moving tapes between the library and the tape drive (column 3, lines 41 – 60).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to combine Anglin with Saxon and Iwamoto because the tape library, robotic controller and RAID array provide additional hardware capabilities for the combined system and thus improve its robustness.

Claims 12 – 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Number 5,758,359 issued to Paul Saxon ("Saxon") in view of U.S. Patent Number 5,604,900 issued to Kouji Iwamoto et al. ("Iwamoto").

With respect to claim 12, Saxon teaches a condition representing a storage capacity of at least one of at least two data storage elements (column 4, line 65 – column 5, line 14);

based on condition, storing the data on the data storage element associated with an earliest time of storage (column 7, lines 22 – 27); and

based on whether at least one of the at least two data storage elements includes available capacity, storing the data on the data storage element associated with the earliest time of storage (column 5, lines 39 – 45, column 7, lines 28 – 32 and lines 43 – 50).

Saxon's teaching states that the method of Saxon proceeds in reverse timestamp order, beginning with the timestamp of the most recent save set as the current timestamp. The total size is compared to the maximum size threshold to determine if the total size is less than or equal to the maximum size threshold. Saxon's teaching shows that processor is comparing with respect to timestamp to determining the maximum size threshold based on condition.

Saxon does not explicitly teach detecting a condition as claimed.

Iwamoto teaches claimed detecting a condition (column 6, lines 29 – 38; Iwamoto).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine Iwamoto with Saxon, combination would make a system capable of dynamically expanding a file while retaining an optimum allocation space efficiency of a data store medium and allowing file recovery and job degradation when a failure of a dynamically expanded file or dynamic file expansion itself occurs (column 2, lines 55 – 67; Iwamoto).

As to claim 13, associating at least one time of storage with the at least two data storage elements (column 4, line 66 – column 5, line 5; Saxon).

As to claim 14, comparing at least one time of storage with at least two data storage elements; and identifying the data storage element associated with the earliest time of storage (column 5, lines 4 – 14 and column 7, lines 43 – 50; Saxon).

As to claim 15, based on whether at least one of the at least two data storage elements includes available capacity, storing the data on the at least one data storage element including available capacity (column 5, lines 39 – 45, column 7, lines 19 –27; Saxon).

As to claim 16, storing the data on the at least one data storage element including available capacity until the at least one data storage element reaches capacity (column 7, lines 19 – 32; Saxon).

The subject matter of claims 17 and 18 are rejected in the analysis above in claims 6 – 9 and 12 – 16 and these claims are rejected on that basis.

Claims 19 – 21, 22 – 26 and 27 – 28 are essentially the same as claims 6 – 9 and 12 – 16 except that it sets forth the claimed invention as a processor program rather than a method and rejected for the same reasons as applied hereinabove.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shahid Al Alam whose telephone number is (703) 305-2358. The examiner can normally be reached on Monday - Thursday 8:00 A.M. to 4:30 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Y. Vu can be reached on (703) 305-4393. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-7239 for regular communications and (703) 746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Shahid Al Alam
Examiner
Art Unit 2172

SAA
January 26, 2003